Thoughts Coming Into This Year

Pi Tau Sigma – Delta Beta has been nothing more than a resume achievement prior to this year. Members would join and never make contact with the club again. The officers for 2012-2013 (listed below) decided that this chilling fact would no longer be an option… and thus began the turning point for Pi Tau Sigma – Delta Beta that our Mechanical Engineering Department will never forget. And all this was possible with the hard work of the following officers:

- President: Christopher J. Colizzi III
- Vice President: Andrew J. Pytlinski
- Secretary: Christopher W. Duff
- Treasurer: Alexander Bielawiec
- E-Council Representative: Andrew J. Martens
- Events Coordinator: Guillermo Corona

The whole idea for the year was creating a network of hard working, knowledgeable and talented engineers and engineering students that wanted to not only create a great learning/work environment for themselves but also everyone around them. This started during the summer of 2012 (**Error! eference source not found.**). All ASME and Pi Tau Sigma officers went to San Diego for a kickoff meeting to discuss ideas on how to make the upcoming year a corner stone for both clubs.

Figure 1: Summer ASME and PTS Planning - San

Initiates

Pi Tau Sigma – Delta Beta Chapter has a reputation for producing some of the best Mechanical Engineers. The Delta Beta Chapter molds Mechanical Engineers to have the skills of making any job or project work in the most effective way possible. A lot of this success is a result of our strict recruiting regimen. The selection process for inviting Mechanical Engineering students to initiate for Pi Tau Sigma – Delta Beta begins well before the first day of class. The club contacts the Mechanical Engineering Department 2 weeks prior to class and requests a list of students who meet the following requirements:

- Top 35% of senior class / 25% of junior class
- Minimum 3.0 Overall GPA
- Minimum 2.7 ME GPA (excluding all General Education classes)
- Minimum 40 ME units completed
- Minimum 36 units completed at Cal Poly Pomona

Note that the last 2 requirements have been implemented to filter out transfer students that come into the department with junior status without even taking a single class on campus. After that, the initiates are required to go through a quarter long initiation process that includes volunteering for the Mechanical Engineering Department a minimum of 5 hours and obtaining 10 signatures from current Pi Tau Sigma members (which includes two from faculty members and 3 from current officers). The initiates for this year are listed at the end of this report.

Notat that in the fall quarter, Pi Tau Sigma – Delta Beta initiated 20 students. This was average/slightly above average compared to previous years. Spring quarter was the best representation of how much Pi Tau Sigma – Delta Beta has grown this year. There were 38 initiates for spring quarter, which easily doubled what other year's would've expected. This jump in number was expected this year, though. Refer below for details on how Pi Tau Sigma – Delta Beta worked to grow this year.

Incoming Goals

California State Polytechnic University, Pomona is an extremely accessible school. This is due to the fact that its location is ideal for many local communities. Fortunately Cal Poly Pomona has the reputation of being one of the best Engineering schools in Southern California. Unfortunately it is also known as being a commuter school due to its prime time location. This has made club participation the toughest part of being a Pi Tau Sigma officer. The most important goal for the club was to get members involved. Other goals included bridging the gap between education and industry, getting members working in the field, setting up the club for future expansion and creating a network of Pi Tau Sigma – Delta Beta members, graduated and initiating alike. Note that all this had to be accomplished with close to zero money (account had 100 dollars in it at the beginning of the year).

Reaching Our Goals

The goal of getting members involved was Pi Tau Sigma's number one priority. To do this the club made it more interesting becoming a member. This years meeting's included games, engineering trivia, relative engineering videos and community service hours for being involved during the meetings. Other ways to get members involved were incorporating facility tours, company information sessions and taking part in school activities.

Meetings

Meetings were held Thursdays on a bi-weekly basis, always offset of ASME meetings by one week. They were during "U-Hour" (between 12 and 1 o'clock) because there are no classes scheduled during this time. Things typically discussed were upcoming events, community service opportunities and initiation progress for the incoming members. At the second meeting of the year there was a competition to make the biggest tower constructed of paper and a couple feet of tape (Figure 2). This style of meeting was kept consistent the entire year.

Figure 2: Fall 2012 Paper

Facility Tours

This was one of the main things Pi Tau Sigma – Delta Beta put its efforts in. It was seen as the most effective way to get students out into industry and see how engineering really works. The club took 3 facility tours this year.

Boeing El Segundo

The first was to Boeing El Segundo (a Satellite design and manufacturing facility). Hear initiates and members got to see the size of commercial satellites (which can be as wide as a 787!), vibration tables used to simulate take off, a heat exchanger capable of reaching -320°F and their first experience with an anechoic chamber (but not the last!).

Figure 3: Boeing El Segundo Facility Tour

Boeing Long Beach

The second tour of the year was to Boeing Long Beach. This facility does stress analysis for commercial jets. This was more of a sit in with management and engineering personnel to see how a company as big and busy as Boeing gets business done on a daily basis. This tour included a presentation of using Catia, a FEA analysis presentation, a presentation of

using their organization program designed to implement the most effective work flow, the challenge of conquering a Gordian Knot and a tour of their onsite museum. The managers also collected our resumes and offered an internship to two members.

Figure 4: Boeing Long Beach Facility Tour

Edwards Air Force Base Tour

This tour was by far the best. Pi Tau Sigma – Delta Beta has a member working at Edwards AFB and have setup a yearly tour that takes members and initiates on a bus around their complex. The schedule had the F22 on it, but due to a last minute change the F22 was scrapped and replaced with the F35!!! Members were allowed to TOUCH the F35, as well as look in the cockpit, pull wires for the landing gear, etc… Other things seen on this tour included the B1 Bomber, B52 Bomber, F16, T138, Global Hawk Block 20 and Block 40 and a number of retired planes including the SR71. A group pictures was taken in front of the F35 (still pending security screening clearance before release) and in front of the Global Hawk Block 20 (shown below).

Figure 5: Edwards AFB Facility Tour

JPL Information Session

As another way to connect our members to the engineering community and to create interest in Pi Tau Sigma, we setup an information session with the Jet Propulsion Lab Representative responsible for hiring Cal Poly Pomona students. This took place of one of our meetings during the spring quarter. Information was given for upcoming projects at JPL, what the recruiters like to see on resumes, the best time to apply for jobs, etc. Thanks to our contact giving the information session, we were able to get a Pi Tau Sigma member into JPL for an ongoing internship.

Egg Drop Competition

There were two egg drop competitions this year. The first was during a meeting. Groups of 4 were to design an egg drop apparatus using paper and uncooked spaghetti (note the materials due to lack of funding). This competition had a high success rate, only one group couldn't construct a functional device.

Figure 6: Egg Drop Competition During

The second competition took place during Engineering Week at Cal Poly Pomona. Pi Tau Sigma – Delta Beta hosted an Egg Drop competition. Pi Tau Sigma's design was by far the most innovative (slits were incorporated to control the failure locations of the device to dissipate energy away from the egg locations).

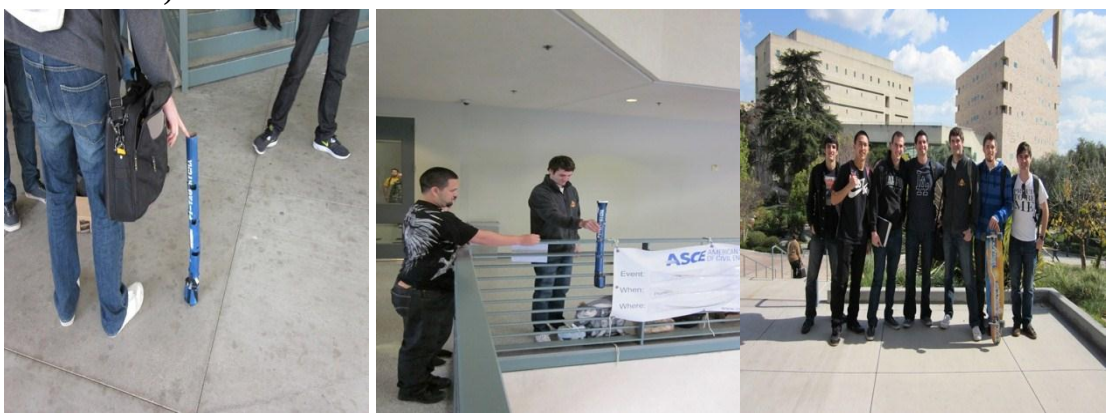

Figure 7: Pi Tau Sigma - Delta Beta Egg Drop Competition E-Week

Pi Tau Sigma Getting Involved

During the year members got involved in a number of ways. First, initiates were offered one community service hour if they joined ASME and went to their meetings. This got 20+ people involved in our ASME club on campus and registered as ASME national members. Secondly, initiates and members alike helped out with other clubs on campus. For example, we had members volunteering for our Rose Float club on campus (Rose Float designs and manufactures a float with Cal Poly San Louis Obispo every year for the Rose Float Parade). We also volunteered with robotics, helping out with their Robot Rallies which display the joys and excitement of robotics to high school students to provoke a career in engineering and computer science. Thirdly, initiates were offered a community service hour for going to the Mechanical Engineering Banquet (organized and hosted by Pi Tau Sigma). And last but not least, Pi Tau Sigma – Delta Beta offers free tutoring to all students, not just engineering. The official time was set for every Tuesday from 12 to 1. Also, individual tutoring

sessions on the side were more than a common thing. Christopher J. Colizzi (Outgoing President for Pi Tau Sigma – Delta Beta) tutored individuals on the side for easily over 70 hours this school year.

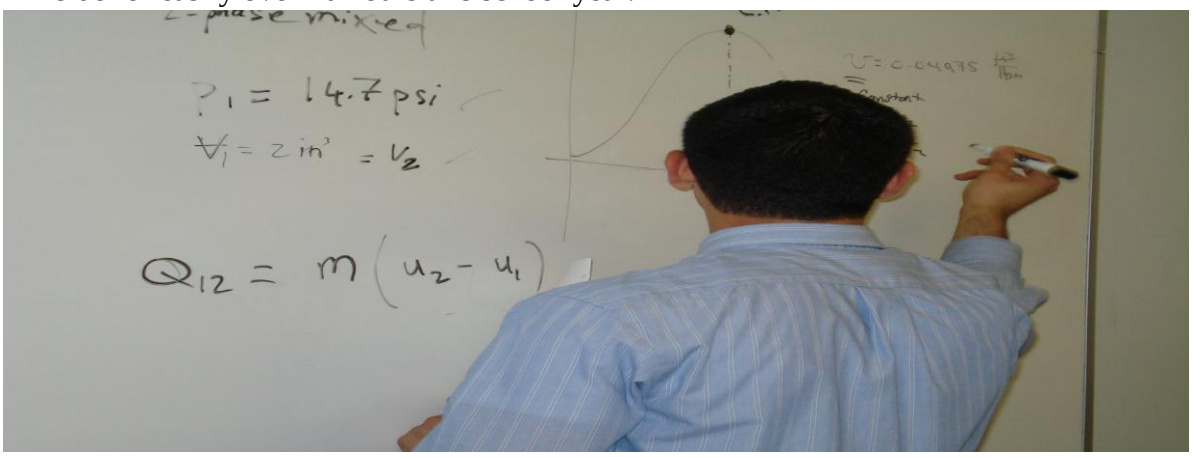

Figure 8: President Christopher J. Colizzi Going Over Basic Thermodynamics During Free Tutoring

Creating a Network of Pi Tau Sigma Members

To do this the officers for this year not only wanted the network for students today but also for members of Pi Tau Sigma that have already graduated. This was done by outreaching to the graduates, making the Mechanical Engineering Banquet on a Saturday so working engineers could go, involving the graduates in the Facility Tours and keeping an open line of communication with all the graduated members, current members and initiates in general. Notable connections made with graduated Pi Tau Sigma members include:

- Ken Jennings – Pi Tau Sigma – Delta Beta graduate, Chief Pilot at Edwards AFB, the guest speaker at the Mechanical Engineering Banquet and our single point of contact for the Edwards AFB Facility Tour
- Albert Gastelum – Pi Tau Sigma – Delta Beta graduate, Project Manager – LADWP and single point of contact for LADWP UV Inspection Plant Facility Tour (Future Goals)

Mechanical Engineering Banquet

As always, Pi Tau Sigma – Delta Beta hosts and organizes the Mechanical Engineering Banquet. This is a yearlong process that Pi Tau Sigma takes from cradle to grave. Last year was the first year with triple digit attendees at the banquet in a long time. That success wanted to be duplicated this year, while also sticking to the main goal of getting members involved. To do this, the banquet this year was held on campus at the Kellogg West Convention Center. It was held on a Saturday for ease of attendance for graduated members that work during the week. The goal was over 100 attendees. There were 108 tickets sold. Another way that members were incorporated in the process was by having a Cal Poly and Pi Tau Sigma alumnus be the main presenter for the banquet. The aforementioned Ken Jennings presented his career path and achievements at the banquet. Lastly, continuing with the year's theme of getting Pi Tau Sigma involved at Cal Poly Pomona, the Robotics, ASME Design Project and ASME clubs presented at the

Mechanical Engineering Banquet as well. Lastly, Pi Tau Sigma – Delta Beta presented to close out the evening.

Future Goals

It was great that this year's growth for Pi Tau Sigma was huge, but it only matters if the support and growth can continue. That is why there was a new position created at the end of this year: Pi Tau Sigma Alumni Representative. A graduating Pi Tau Sigma member holds this position. That member is in charge of creating a network with all the graduating members of that year and keeping them in contact with the club as well as with other alumni. This was implemented to help the club branch out from Cal Poly Pomona and make as many connections in the engineering community as possible. The outgoing President, Christopher J. Colizzi III, was named 2013 Pi Tau Sigma Alumni Representative and has already helped a Pi Tau Sigma member get a full-time job at Applied Instruments Technology and is currently working with Pi Tau Sigma Alumni to setup a facility tour in the fall quarter as well as getting new engineers out to BE Aerospace in North Dakota.

Conclusion

In closing, it has been a wonderful year for the Delta Beta Chapter of Pi Tau Sigma. A solid foundation has been laid for future growth and success with the club, hopefully with some more financial support, but most importantly a strong engineering network has been established with the school itself as well as with the engineering community.

Fall 2012

Adam	Abreo	Daniel	McClelland
Anthony	Aguirre	Jonathan	Ortiz
Roy	Allen	Matthew	Pacheco
Robert	Caballes	John	Prevel
Stefan	Colvey	Michael	Relich
Eric	Duong	Logan	Riley
Synjin	Hipolito	Stanford	Shih
Clinton	Hostetler	Alexander	Tseng
George Brian	Kovatchev	William	Ung
	Mauleon	Amy	Van De Poel

Spring

2013

Robert	Bauer	Kevin	Martin
Yuriy	Bazylev	Felix	Monterroso
Sinclair	Calderon	Amanda	Nicholaou
Alexander	Cawthon	Edwin	Noriega
Joshua	Cheng	David	Oh
Keith	Christman	Nhat	Pham
Christopher	Coon	Scott	Richter
Amanda	Cordes	Omar	Rodriguez
Ashley	Davis	Hunter	Schneider
Francis	Diaz	Wesley	Schroeder
Raymond	Faull	Christine	Sellerberg
Ara	Garakanian	Kathryn	Semans
Edgar	Gonzalez	Andrew	Tran
Wesley	Gunter	Tho	Tran
Michael	Haken	Nhan	Trinh
David	Kramer	Melissa	Troutt
Alex	Kim	Sean	Ulrich
Betty	Leung	Jonathon	Hoy
Donald	Logsdon		
Patrick	Mannion		